

AUG 20 2001

# MAINE STANDARDS COMPANY, LLC

## 510(k) SUMMARY

"This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92."

"The assigned 510(k) number is: K012118."

Submitter: Maine Standards Company  
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Summary prepared on: July 2, 2001

Proprietary Name: VALIDATE Chem 2 Calibration Verification Test Set  
Common Name: Calibration Verification  
Classification Name: Calibrator, Multi-Analyte

### Predicate Devices:

1. **DOCUMENT** Multi-Analyte CAL-VER, K870252, manufactured by CASCO NERL Diagnostics.
2. **DOCUMENT** Uric Acid CAL-VER, K893139, manufactured by CASCO NERL Diagnostics.
3. **DOCUMENT** Direct ISE CAL-VER, K881773, manufactured by CASCO NERL Diagnostics.

**Device description:** VALIDATE Chem 2 Calibration Verification Test Set contains purified chemicals in an aqueous base. Multiple levels are provided to establish the relationship between theoretical operation and actual performance of each of the included analytes. Each set contains one bottle each of six (6) levels, including zero. Each bottle contains 5 milliliters.

**Intended use:** VALIDATE Chem 2 Calibration Verification Test Set is intended for *in vitro* diagnostic use in quantitatively verifying calibration, validating reportable ranges, and determining linearity in automated, semi-automated and manual chemistry systems for the following analytes: carbon dioxide, uric acid, glucose and urea nitrogen.

**Comparison of VALIDATE Chem 2 Calibration Verification Test Set to the predicate devices:**

Table 1 compares characteristics of the VALIDATE Chem 2 Calibration Verification Test Set with those of the DOCUMENT Multi-Analyte CAL•VER, DOCUMENT Direct ISE CAL•VER, and DOCUMENT Uric Acid CAL•VER.

**TABLE 1.** Comparison of VALIDATE Chem 2 Calibration Verification Test Set to the predicates devices.

	<b>VALIDATE CHEM 2 Calibration Verification Test Set</b>	<b>DOCUMENT Multi-Analyte CAL•VER</b>	<b>DOCUMENT Direct ISE CAL•VER</b>	<b>DOCUMENT Uric Acid CAL•VER</b>
<b>Catalog #</b>	10002	M-100	M-101	M-106
<b>Intended Use</b>	For <i>in vitro</i> diagnostic use in quantitatively verifying calibration, validating reportable ranges, and determining linearity in automated, semi-automated and manual chemistry systems.	For <i>in vitro</i> diagnostic use in the quantitative determination of linearity in manual, automated and semi-automated chemistry systems.	For <i>in vitro</i> diagnostic use in the quantitative determination of linearity in manual, automated and semi-automated chemistry systems.	For <i>in vitro</i> diagnostic use in the quantitative determination of linearity in manual, automated and semi-automated chemistry systems.
<b>Analytes</b>	GLU, BUN, CO <sub>2</sub> UA	GLU, BUN, NA, K, CL, CRE, CA, PO <sub>4</sub>	CO <sub>2</sub>	UA
<b>Matrix</b>	aqueous	aqueous	aqueous	aqueous
<b>Number of Levels</b>	6 including Zero	5	5	5
<b>Preparation</b>	Liquid, ready to use	Liquid, ready to use	Liquid, ready to use	Liquid, ready to use
<b>Packaging</b>	5.0 mL each level	15.0 mL each level	10.0 mL each level	5.0 mL each level
<b>Stability</b>	Until Expiration	Until Expiration	Until Expiration	Until Expiration
<b>Storage</b>	2-8°C	18-25°C	18-25°C	2-8°C

The performance of VALIDATE Chem 2 Calibration Verification Test Set solutions on the Roche Diagnostics Hitachi 911 instrument system as compared to DOCUMENT Multi-Analyte CAL•VER, DOCUMENT Direct ISE CAL•VER, and DOCUMENT Uric Acid CAL•VER has been shown to be substantially equivalent using pre-production lots of VALIDATE Chem 2 Calibration Verification Test Set. The results of correlation comparisons between the VALIDATE Chem 2 Calibration Verification Test Set and the predicate devices are presented in Table 2.

**TABLE 2.** Linear Regression Statistical Comparison of VALIDATE Chem 2 Calibration Verification Test Set to the predicate devices.

Analyte	VALIDATE Chem 2 Calibration Verification Test Set		DOCUMENT Multi-Analyte CAL•VER		DOCUMENT Direct ISE CAL•VER		DOCUMENT Uric Acid CAL•VER	
	Correlation Coefficient (r)	Regression Equation Y=intercept + slope(X)	Correlation Coefficient (r)	Regression Equation Y=intercept + slope(X)	Correlation Coefficient (r)	Regression Equation Y=intercept + slope(X)	Correlation Coefficient (r)	Regression Equation Y=intercept + slope(X)
GLU	0.99997	1.493 + .983	0.99994	2.529 + 1.02	N/A	N/A	N/A	N/A
BUN	0.99984	.95 + .965	0.99972	1.836 + .924	N/A	N/A	N/A	N/A
CO2	0.99888	.514 + .946	N/A	N/A	.99791	3.58 + .875	N/A	N/A
UA	0.99935	-.192 + 1.009	N/A	N/A	N/A	N/A	0.99990	.147 + .959

### Summary:

Linear regression analysis was carried out on recovered values for each analyte. Each analyte was tested in triplicate. The VALIDATE Chem 2 Calibration Verification Test Set has been shown to be functionally equivalent for calibration verification and linearity assessment to DOCUMENT Multi-Analyte CAL•VER, DOCUMENT Direct ISE CAL•VER, and DOCUMENT Uric Acid CAL•VER.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

AUG 20 2001

Ms. Christine V. Beach  
Manager, RA/QA  
Maine Standards Company, LLC  
765 Roosevelt Trail  
Windham, ME 04062

Re: 510(k) Number: K012118  
Trade/Device Name: VALIDATE Chem 2 Calibration Verification Test Set  
Regulation Number: 862.1660  
Regulatory Class: Class I, Reserved  
Product Code: JJY  
Dated: July 3, 2001  
Received: July 6, 2001

Dear Ms. Beach:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent to devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895.

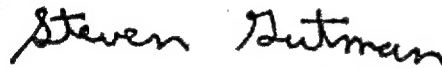
A substantially equivalent determination assumes compliance with the Good Manufacturing Practice for Medical Devices: General (GMP) regulation (21 CFR Part 820) and that, through periodic GMP inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

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This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4588. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsma/dsmamain.html>".

Sincerely yours,

A handwritten signature in black ink that reads "Steven Gutman". The signature is written in a cursive style with a large, stylized 'S' and 'G'.

Steven I. Gutman, M.D., M.B.A.  
Director  
Division of Clinical Laboratory Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## INDICATIONS FOR USE STATEMENT

510(k) Number: K012118

Device Name: VALIDATE Chem 2 Calibration Verification Test Set

### Indications for Use:

The VALIDATE Chem 2 Calibration Verification Test Set is used by trained laboratory professionals for quantitatively verifying calibration, validating reportable ranges, and determining linearity in automated, semi-automated and manual chemistry systems for the following analytes: carbon dioxide, uric acid, glucose, and urea nitrogen.

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### Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use X  
(Per 21 CFR 801.109)

OR

Over-The-Counter Use

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*Teresa Alexander for Jean Caper*  
(Division Sign-Off)  
Division of Clinical Laboratory Devices

510(k) Number K012118